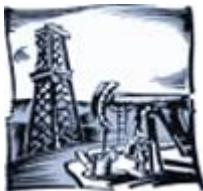


## Rocket Propellant 1 Specifications & DOT Shipping Information



CHARACTERISTIC	PROCURED/DELIVERED	
SPECIFICATION:	<a href="#">MIL-DTL-25576D</a>	
CCAFS Test Identification Procedure:	POL 5001	
Distillation:	Ranges:	
a) 10%	a) 365 °F - 410 °F	
b) End point	b) 525 °F (max)	
c) Residue	c) 1.5% by vol. (ml) (max)	
d) Loss	d) 1.5% by vol. (ml) (max)	
Color	Red	
Flash point	110 °F (min)	
Gravity	42.0° API (min)	45.5° API (max)
Freezing point	-36 °F (max)	
Water content	No visible layer (<80 ppm/vol.)	
Particulate	5.7 mg/U. S. gallon (max)	

NOTE: RP-1 is procured to MIL-DTL-25576D. RP-2, which has an ultra-low-sulphur content, is not used at KSC/CCAFS.

JBOSC provides filtration by 1.0 micron absolute filter/water-separator cart whenever transferring RP-1 into or out of storage tanks. The delivery tankers themselves are not equipped with filters.

Usage and Other Data: Rocket Propellant # 1, or RP-1 as it is now commonly known, is a kerosene-type fuel used with liquid oxygen in the first stages of the Atlas 5 and Delta II expendable launch vehicles. RP-1 is either direct delivered to pad storage tanks by vendor tankers or transferred to 7000-gallon KSC/CCAFS tankers for storage and later delivery.

Proper Shipping Name and Container Markings:

49 CFR 172.101 Hazardous Materials Table

Sym-bols	Hazardous material descriptions & proper shipping names	Hazard Class or Division	Identifi-cation numbers	PG	Label Codes	Special Provision	Packaging (173.***)			Quantity Limitations		Vessel Stowage	
							Excep-tions	Non Bulk	Bulk	Passenger aircraft/ rail	Cargo aircraft only	Loca-tion	Other

DOT Hazardous Material Codes and Regulations will explain the letters and numbers.

Sample Table

	Kerosene	3	UN1223	III	3	B1, T1	Packaging (173.***)			Quantity Limitations		Vessel Stowage	
							150	203	242	60L	220L	A	



Markings for a "bulk container" (over 119 gallon capacity) with 12"-sided placards. An authorized variance would have the identification number replace the words on the primary hazard placard (with the number at the bottom corner). Non-bulk containers would use the similar 3"-sided labels and have "UN(ID#)" nearby. The proper shipping name would also appear near the labels or placards.



Updated: October 5, 2006